

Syllabus: Astronomy 1144

Introduction to Stars, Galaxies, & Cosmology; Autumn Semester, 2013

Todd A. Thompson

Lectures: MWF, 11:30am — 12:25pm, McPherson Lab 2015

Professor: Todd A. Thompson

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Recommended Textbook: *Astronomy Today*, 7th Edition, by Chaisson & McMillan

Course Web Page: www.astronomy.ohio-state.edu/~thompson/1144

Course Goals & Learning Objectives:

Astronomy 1144 is an overview of the universe beyond our solar system. It is a General Education Curriculum (GEC) Physical Science course in the Natural Science category. Astronomy 1144 covers three overarching and interconnected topics: stars, galaxies, and the universe on its largest scales. I hope to convey a number of the facts that astronomers and astrophysicists have learned about these topics, to describe the outstanding scientific problems that are the focus of current research, to illustrate ways in which physical principles are used to understand the universe, and finally to show how scientific theories are developed and tested against observations.

Among the questions that I hope you will be able to answer by the end of the course are the following: What is a star? What is a galaxy? What is the evidence for dark matter and what might it be? What is the Big Bang theory? What empirical evidence supports and/or challenges our explanations for the physical nature of stars, galaxies, and the cosmos?

Homework:

There will be four Homework Assignments, each consisting of a set of multiple-choice questions. The questions are open-book, open-notes, and open-discussion. You will provide answers using bubble sheets to be returned in class on the due date. Collectively the homework will count for 20% of your grade. Homework is due on the following class days:

Homework 1 : Wednesday, Sept 11

Homework 2 : Wednesday, Oct 9

Homework 3 : Wednesday, Nov 6

Homework 4 : Monday, Dec 2

No late homework will be accepted, except for legitimate, documented emergencies.

In-Class Quizzes:

There will be three in-class quizzes, held at normal class time. There will be no lecture on quiz days, and the quiz will start promptly at class time. Each quiz will cover the material in the lectures

(and readings) since the previous quiz. All quizzes are closed-book, closed-notes multiple-choice tests. They will consist of approximately 40 questions. Collectively, the quizzes will account for 40% of your final grade.

The quizzes are scheduled for the following class days at normal class time:

Quiz 1: Friday, Sept 20

Quiz 2: Friday, Oct 18

Quiz 3: Friday, Nov 15

Makeup quizzes are only offered by advance arrangement with the professor. Exceptions are for legitimate, documentable emergencies. If you will be away on an official University-sponsored activity (e.g., sports teams, band, etc.), please bring me a letter from your coach, director, etc. in advance of the quiz. Quizzes must be made up by the Wednesday after the quiz you missed, otherwise that quiz becomes the one that I will drop in computing your final grade.

Final Exam:

The Final Exam will be on Monday, December 9 from 12:00-1:45pm. Attendance at the Final Exam is mandatory. The final will be comprehensive, covering all lectures, and has the same multiple-choice format as the in-class quizzes, only about two times longer. It is worth 40% of your grade.

No makeup final will be offered. Persons who miss the final exam will be given an incomplete (I) with an alternative grade equal to getting a zero on the final, and have to make it up during the following Quarter to avoid the alternative grade. In keeping with official University policy, early finals will not be available for those persons who wish to depart early for break. Please plan ahead and make your travel plans accordingly.

Grading Policy:

- The 4 homework assignments collectively account for 20% of your final grade.
- The lowest score of the 3 in-class quizzes will be dropped in computing your final quiz grade. Together, the 2 remaining in-class quizzes will account for 40% of your final grade.
- The final exam accounts for 40% of your final grade, and must be taken by all students.
- Attendance is strongly encouraged. I will take attendance every day and it will count towards your final grade. A reasonable number of unexcused absences (e.g., 5) will not negatively impact your final grade. Near-perfect attendance will allow me to bump up your final grade if you are close to a grade boundary.
- Participation is strongly encouraged. I will often ask if there are any questions or comments on the topics covered, or on sample Quiz and Homework questions we discuss in class. Participation counts towards your final grade, and will be used to bump it up (e.g., from a B+ to an A-) in the event that your calculated final grade is within approximately 1% of the higher score.

Lectures, Notes, & Readings:

Lectures will be daily, 11:30am — 12:25pm. These are your primary resource for this course. The textbook is used as a secondary reference from which related readings will be suggested.

In between these two resources in importance are the daily lecture notes available on the web. These notes are meant to be useful aids for studying and following along during lectures; they are no substitute for attendance. Most students find that the best strategy is to print out the notes, bring them to class, and then add their own notes in the margins. Remember, these are only outlines of what I cover each day in class, not comprehensive transcripts of the lectures.

Textbook:

Because introductory astronomy textbooks designed for non-majors are rarely organized exactly the same as our courses, we will not strictly follow the order of topics in the book. You can expect to jump around as the course progresses. As such, instead of specific reading assignments, each section of the course has related reading suggestions from the text. Not all topics in this course are covered by the book, and similarly not all topics covered in the book will be discussed in class. You are only responsible for the contents of my lectures.

Students with Disabilities:

Any student who feels that he or she may need an accommodation based on the impact of a disability should contact Professor Thompson to discuss their specific needs. We will rely on the Office of Disability Services (ODS) at OSU to verify the need for accommodation and to help develop the appropriate strategies. Students with disabilities who have not previously contacted ODS are encouraged to do so, by visiting the ODS website at www.ods.ohio-state.edu and requesting an appointment. Please take care of this well in advance of the quizzes, as processing the paperwork takes time.